

of Oxford, and others were obtained by the Australian observatories at Perth, Melbourne, and Sydney. In November 1893, Turner contributed to the Royal Astronomical Society a short and important paper on the method to be employed in the determination of the positions of the stars from the micrometric measures of the photographs, a method which has been generally adopted by astronomers. After the death of Pritchard in 1893, Turner was appointed to succeed him as Savilian professor of astronomy at Oxford, and carried out the part of the work allotted to Oxford with great energy. He took the line that the short exposure photographs, which would give the positions of some two million stars, should be measured and the rectangular co-ordinates of the star-images published promptly with such additional data as were necessary for the determination of the accurate positions of the stars. He urged this very strongly, and on the formation of the International Astronomical Union was, on the nomination of the first president, M. Baillaud, appointed chairman of the Committee dealing with the International Photographic Map of the Heavens. His efforts have brought the scheme much nearer completion than it would otherwise have been. After finishing the Oxford section, he measured photographs belonging to other observatories, and was largely instrumental in getting the observatory of the Nizam of Hyderabad to take up the photography and measurement of a zone allotted to an observatory which had later been unable to carry out the work. Among other interesting by-products of the work, Turner found that owing to curvature of the field, the photographs which were in critical focus at a distance of 30' or 40' showed far fewer stars at the centre of the field than at this distance.

Turner was a delightful popular exponent of astronomy, with a natural facility for speaking. He also wrote several popular works on astronomical subjects. His short and lively contributions to the *Observatory* magazine, "From an Oxford Notebook," were widely read and appreciated. Some of these consisted of amusing incidents or historical reminiscences interesting to astronomers. Others contained references to the current work and publications of other astronomers, with friendly criticism and appreciation.

On the death of his friend Prof. Milne, Turner took charge and largely extended the organisation which Milne had formed for the collection of seismographic records from all parts of the world. Milne-Shaw seismographs, comparatively inexpensive instruments devised by Milne, but improved greatly by Mr. Shaw of West Bromwich and manufactured by him, have been installed all over the world and the times of different phases of the shocks were reported to Turner at Oxford. As in the *Astrographic Catalogue*, he attached great importance to the prompt collection and publication of these data, which have thrown great light on the internal constitution of the earth. Turner made frequent harmonic analyses of earthquake records with the view of finding correlation between them and other astronomical and meteorological phenomena.

His disposition made Turner like work in co-operation with other people. He always enjoyed the international meetings of astronomers and other men of science. He invited the International Solar Union to Oxford in 1907, and attended the meetings at Meudon in 1904, at Mt. Wilson in 1910, and at Bonn in 1913. He was also a Royal Society representative at the meetings of the International Association of Academies. At the meetings of the International Astronomical Union he has been president of the Committee for the Photographic Map of the Heavens, and at the International Union of Geodesy and Geophysics, president of the Section of Seismology. He was secretary of the British Association from 1913 to 1922.

Turner will be greatly missed at the meetings of the Royal Astronomical Society, which he attended with the greatest regularity. He has served on the council for forty-three years, and has been secretary, president, and foreign secretary of the Society. At the council meetings he invariably took a charitable view of a doubtful paper, and at the meetings never failed to compliment a young author on his research. At the dining club after the meetings he was secretary and Glaisher president, to the great satisfaction of the members, for many years. On Glaisher's resignation owing to failing health, Turner became president, and continued to delight and enliven the gathering by speech and occasionally by song. He took a great interest in other people's work, including modern developments, and was a very kindly and genial colleague, whose death will be mourned by astronomers all over the world.

Prof. Turner was elected a fellow of the Royal Society in 1896. He was a corresponding member of the Paris Academy of Sciences, and he received the Bruce medal of the Astronomical Society of the Pacific in 1927. He was given honorary doctorates by the Universities of Leeds, Sydney, Wales, Strasbourg, Durham, and California. F. W. D.

PROF. J. F. POMPECKJ.

DR. JOSEF FELIX POMPECKJ, professor of geology and palæontology in the University of Berlin, and Geheimer Bergrat, died on July 8, while still in the midst of his activities. He was born in East Prussia on May 10, 1867, and graduated as Ph.D. at Königsberg in 1890, with a thesis on Trilobites. He had a varied official career, beginning in 1891 as assistant in the geological institute at Tübingen, and removing two years later to Munich, where he was both a curator in the Palæontological Museum and *privat-docent* in the University. In 1904 he became professor in the Agricultural Academy at Hohenheim, and in 1907 he was promoted to the professorship of geology first in the University of Königsberg and then in the University of Göttingen, where he followed A. von Koenen. He remained at Göttingen for six years, and in 1913 returned to Tübingen as professor in succession to E. Koken. In 1917, on the retirement of his old teacher, W. Branca, he was appointed professor in the University of Berlin, and in 1925-26 he served his term as rector of the University.

Prof. Pompeckj was especially insistent on the necessity of studying sedimentary rocks and fossils together, and all his researches were guided by this idea. In continuation of his doctoral thesis, he began by studying the Trilobites and other early Palaeozoic fossils and their distribution in the various rocks in which they were found. He published papers on Trilobites and on the Cambrian formations of Bohemia, Sardinia, and other regions. In his latest years he returned to the same subject when examining the boulders on the north German plain. His most important work, however, was on the stratigraphy of the Jurassic formation, especially of Württemberg, but also of the Arctic regions, from which he examined several collections of rocks and fossils. In this connexion he became an authority on certain groups of Ammonites and other Mollusca. He was ever in search of general principles, and his addresses on the former extension of seas (1909), on race-persistence among Ammonites (1910), on the origin of the copper-slate (1920), and on environment, adaptation, and struggle in the light of geological research (1925), are full of interesting and valuable suggestions.

Outside the University, Prof. Pompeckj also took his full share in promoting geological and palaeontological science. For many years he was one of the editors of the *Palaeontographica*, *Geo-*

logische und Paläontologische Abhandlungen, and *Neues Jahrbuch für Mineralogie, etc.*, and he was an active member of the German Geological Society, of which he was several times president. The Geological Society of London expressed its appreciation of Prof. Pompeckj's contributions to science by electing him a foreign correspondent in 1925.

WE regret to announce the following deaths :

Dr. Henry Fraser, formerly director of the Institute for Medical Research, Federated Malay States, when he made valuable contributions to our knowledge of beri-beri, bacillary dysentery, and leprosy, on July 17, aged fifty-seven years.

Mrs. Albert Howard, Second Imperial Economic Botanist to the Government of India, who was associated with her husband in the work of the Institute of Plant Industry, Indore, on Aug. 18, aged fifty-three years.

His Grace the Duke of Northumberland, K.G., president of the Royal Institution and Chancellor of the University of Durham, on Aug. 23, aged fifty years.

Dr. George W. Patterson, associate dean of the College of Engineering of the University of Michigan, known for work on standards of electrical current, on May 22, aged sixty-six years.

Prof. Conrad von Seelhorst, professor of agriculture in the University of Göttingen, author of "Handbuch der Moorkultur", on July 6, aged seventy-seven years.

News and Views.

THE anniversary address of Mr. C. R. Peers, president of the Society of Antiquaries, which is printed in full in *The Antiquaries Journal* for July, ranged over a wide variety of topics in archæological research, not the least interesting section being his review of current activities in the field. A matter of special interest to the readers of NATURE, in view of recent correspondence in our columns, was the reference to the researches of Mr. Reid Moir and Mr. Burchell on the boulder clay of Norfolk and Yorkshire. Touching upon the archæological aspect of their work, he pointed out that in common with other recent research, it tended to contract still further the distinction which has been drawn between the culture of palæolithic and neolithic man. For these glacial deposits have been found to contain an appreciable number of flints which were surface deposits before the clay was laid down, and are, therefore, indubitably of palæolithic date, yet of a type which would generally be regarded without question as being neolithic. Such a classification, he said, can no longer be accepted, and palæolithic man would appear to have "made a most impressive invasion of what, till late, was neolithic territory".

IN dealing with research in the field, Mr. Peers referred in some detail to the conditions in which excavations are being carried out under the auspices of the Society of Antiquaries at Colchester and St. Albans. A preliminary account dealing with the first fortnight's work at St. Albans appeared in the *Manchester Guardian* of Aug. 14. The prospects are indeed promising. There are already indications that it may be possible to fix with some certainty the date of the

great defensive Roman wall, assigned by some to the first, by others to the third century A.D. If further investigations confirm that it is of first century date, as the evidence at present suggests, it will also fix the date of the London wall, which is identical in construction with that at St. Albans, and in both cases will demonstrate the correctness of the view which holds that these cities were walled after the suppression of Boudicca's rebellion. The entrance gates of the town have been unearthed and the foundations of one of the two flanking towers usually found with such gates have been laid bare. Verulamium has a history stretching from prehistoric times to the fifth century A.D. This is unique in Britain, and with the view of throwing light on its Celtic culture and on the later phases in its history, Mrs. Wheeler is excavating houses fronting on Watling Street within the town. Three have now been unearthed. They show that after the Roman occupation the Roman art of building was lost, but a remarkable pot, unearthed from the beaten clay floor which had been laid down over the tessellated pavement, suggests that the Roman-taught art of pottery was still practised in degenerate form.

WE have received an interesting communication, unfortunately too long to print in full, from a correspondent, W. W. L., commenting upon the views expressed in our article "Education, Environment, and the Criminal" (NATURE, July 12, p. 45). The writer directs attention to the arguments and assumptions typified in that article, and urges that the attitude of science to-day countenances a self-expression demanded for unregulated and uncontrolled impulses